



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,810	01/07/2002	Stuart A. Schweid	D/A1090 XER 2 0430	2885

7590 01/11/2005  
JASON A. WORGULL  
Fay, Sharpe, Fagan  
Minnich & McKee, LLP  
1100 Superior Avenue, 7th Floor  
Cleveland, OH 44114-2518

EXAMINER

KASSA, YOSEF

ART UNIT PAPER NUMBER

2625

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/040,810	<b>Applicant(s)</b> SCHWEID, STUART A.	
	<b>Examiner</b> YOSEF KASSA	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 and 21 is/are allowed.
- 6) ☒ Claim(s) 14 is/are rejected.
- 7) ☒ Claim(s) 15-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>01/07/2002</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masui (U.S. Patent 5,373,371), and further in view of Nakaie (U.S. Patent 6,049,409).

With regard to claim 14, Maui discloses scanning a document to produce image data made up of scan lines having ON and OFF pixels (see Fig. 6, shows document scanning process and scan lines values also see col. 4, lines 26-39);

determining a first independent, i.e., fast scan direction, skew angle estimate, i.e., shift calculate, based on a number of ON pixels on a plurality of scan lines along a fast scan direction (see Fig. 4, the process of scanning horizontal (fast scan) direction which has value of zero's and one's, and document has angle respect to horizontal scan line also see col. 3, lines 15-33);

determining a second independent, i.e., slow scan direction, skew angle estimate, i.e., shift calculate, based on a number of ON pixels on a plurality of scan columns along a slow scan direction (see Fig. 4, the process of scanning vertical (slow scan) direction which has value of zero's and one's, and document has angle respect to vertical scan line); and

merging the first and second independent skew angle estimates to yield the document skew angle (which can broadly reads on the fast scan value (angle or shift) from item 105, in Fig. 1, and the slow scan value from item 105, in Fig. 1, both values stored in memory 106a and these values are transferred to correction unit 107).

While Masui discloses storing fast scan and slow scan values in the same memory unit and image correction process in the same correcting unit, he does not expressly call for merging the first and second independent skew angle. However, at the same field of endeavor, Nakaie teaches this feature (see col. 7, lines 23-35). At the time of invention was made, it would have been obvious to an ordinary skill in the art to incorporate the teaching of Nakaie combining fast scan and slow scan precess into Masui's system. The motivation doing so is to provide process of combining fast scan and slow scan document image information.

***Allowable Subject Matter***

2. Claims 1-13 and 21 are allowed.

The following is an examiner's statement of reasons for allowance. The closest prior art of record failed to teach or suggest, calculation yielding a fast scan second order moment data set, and a second order moment of ON pixels on the at least one scan line along the slow scan direction for a plurality of document rotation angles, calculation yielding a slow scan second order moment data set, calculating a first skew angle estimate from the fast scan second order moment data set, calculating a second skew angle estimate from the slow scan second order moment data set, determining

Art Unit: 2625

whether the fast scan second order moment data set and the slow scan second order moment data set are valid, and combining calculated skew angle estimates corresponding to valid second order moment data sets to yield a resultant skew angle. Therefore, in combination with all the other limitations claims 1-13 and 21 are allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Claims 15-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Other Prior Art Cited***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. (5,528,387) to Kelly et al discloses electronic image registration for a scanning.

US Patent No. (5,452,374) to Cullen et al discloses skew detection and correction of a document image representation.

US Patent No. (5,359,677) to Katsurada et al discloses image reader and facsimile machine using such image reader.

US Patent No. (5,671,440) to Lan discloses color image data reorientation and format conversion system.

US Patent No. (5,027,227) to Kita discloses image rotating device.

### **Conclusion**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (703) 306-5918. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BHAVESH MEHTA can be reached on (703) 308-5246. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communication and (703) 872-9306 for after Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (703) 306-5631. The group receptionist number for TC 2600 is (703) 305-4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

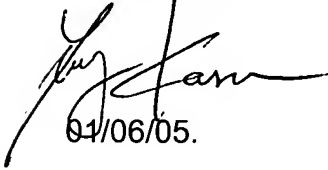
Art Unit: 2625

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**PATENT EXAMINER**

Yosef Kassa

A handwritten signature in black ink, appearing to read 'Y. Kassa', is written over the printed name and date.

01/06/05.